

Applicant: Peter Martin Smit
Serial No.: 10/533,164
Group Art Unit: 3753

REMARKS

No new matter is added by this amendment. The present application was filed on November 11, 2005 with original claims 1-10. In a previously filed amendment, claim 1 was amended and claim 2 was cancelled. The claims remaining in consideration are claims 1 and 3-10, of which claim 1 is the only independent claim. Reconsideration is respectfully requested.

Claims 1, 3, and 4-10 were rejected under 35 USC §103(a) as being unpatentable over by US Patent 5,402,818 (Kasugai) in view of US Patent 2,827,915 (Mitchell). This rejection is respectfully traversed.

Previously amended independent claim 1 sets forth a valve assembly able to be mounted with a liquid container. The valve assembly includes a housing, a liquid inlet, and a breather float valve. The housing has a passageway that extends through the housing and has openings for liquid in the container to pass in and out of the passageway. The liquid inlet forms part of the housing and allows fluid to pass into the housing. The inlet float valve is mounted within the housing and is movable between an open position that permits the flow of liquid through the liquid inlet and a closed position that prevents the flow of liquid through the liquid inlet. The breather float valve is mounted within the housing and is movable with liquid level in the housing between an open position to allow gas to pass through the passageway and out of the housing, and a closed position that prevents liquid from passing through the passageway and out of the housing. The valve assembly is characterized in that it includes a relief valve that is movable between an open position and a closed position to allow pressure to be relieved from the container.

Claim 1 includes a breather float valve mounted within the housing. The breather float valve is movable with liquid level in the housing between an open position to allow gas to pass through the passageway and out of the housing and a closed position that prevents liquid from passing through the passageway and out of the housing. The Applicant submits that a breather valve having these features is not shown in Kasugai.

Kasugai et al discloses a breather valve which allows gas to pass from the fuel tank into the atmosphere via a positive pressure regulating valve mechanism 30 and allows gas to

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pass from the atmosphere into the fuel tank via a negative pressure regulating valve mechanism 50. The operation of the positive pressure regulating valve mechanism is described at column 13, lines 12-35, corresponding to FIG. 5. The operation of the negative pressure regulating valve mechanism 50 described at column 13, line 36, to column 14, line 8, corresponding to FIG. 6. The operation of the breather valve in Kasugai is solely dictated by pressure differentials between the atmosphere and the fuel tank. That is, when there is a difference between the pressure within the fuel tank and atmospheric pressure, then the breather valve is activated.

The Examiner has nominated the float valve 71 of Kasugai as fulfilling the function of a breather float valve which is mounted within the housing of the valve assembly and which is “movable with liquid level in the housing between an open position to allow gas to pass through the passageway and out of the housing, and a closed position that prevents liquid from passing through the passageway and out of the housing”, as required by the present invention.

In Kasugai, the regulation of gas passing through the passageway and out of the housing is actually achieved by way of the positive pressure regulating valve mechanism 30 and the negative pressure regulating valve mechanism 50 (see column 5, lines 21-37). The float valve 71 of Kasugai *does not* regulate the gas pressure. In fact, gas may be prevented by the positive pressure regulating valve mechanism 30 and the negative pressure regulating valve mechanism 50 from passing through the passageway and out of the housing even when the float valve 71 is open. The sole function of the float valve 71 is to prevent *liquid* from passing through the passageway and out of the housing. Breather functionality in Kasugai is provided by the positive pressure regulating valve mechanism 30 and the negative pressure regulating valve mechanism 50. Applicant further submits that relief valve functionality is provided by safety valve mechanism 60 (see column 5, lines 38-42). Thus, the structure, and the operation of the Kasugai device is very different to that of the present invention as claimed in independent claim 1.

The Examiner has utilized Mitchell to teach an inlet float valve. However, the float valve of Mitchell is not within the housing of the valve assembly as required by independent

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claim 1. The Examiner has suggested that item 13 of Mitchell is a shelter providing within the fuel chamber. However, Mitchell states that that the item 13 is a passage (see column 2, line 38) through which the fluid flows when the valve member is raised. It is essential to the invention of the current application that the inlet float valve is mounted within a housing so that impact forces created by surging fuel within the fuel tank impact the housing rather than the impact float valve (see page 6, lines 9-11 of the subject patent application).

This is very different to the breather valve arrangement as claimed in the Applicant's Patent Application. The breather valve as claimed between an open and a closed position in response to movement of a liquid level within the housing. That is, liquid moves the breather float valve from the open position in which gas is allowed to pass through the passageway and out of the housing to a closed position in which the breather float valve prevents liquid from passing through the passageway and out of the housing. The breather float valve moves between an open and a closed position via liquid acting on the breather float valve and not via gas pressure as disclosed in Kasugai.

Applicant submits that neither Kasugai nor Mitchell teach or suggest, singularly or in combination, the claimed combination, and specifically, a housing to protect the inlet float valve from surging fluid. Therefore, applicant respectfully asserts that the §103(a) rejection is improper and must be withdrawn.

Claims 3-10 are ultimately dependent upon allowable claim 1. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 3-10 are also allowable.

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The proper fee for a two-month extension of time is submitted herewith. If any additional fees are necessary, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 08-2789 in the name of Howard & Howard Attorneys, P.C.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

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Date

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